

SEQUENCE SUBMISSION

SEQ ID NO: 1 provides primate IL-1 δ nucleotide sequence.
 SEQ ID NO: 2 provides primate IL-1 δ polypeptide sequence.
 5 SEQ ID NO: 3 provides primate IL-1 ϵ nucleotide sequence.
 SEQ ID NO: 4 provides primate IL-1 ϵ polypeptide sequence.
 SEQ ID NO: 5 provides primate IL-1 α polypeptide sequence.
 SEQ ID NO: 6 provides primate IL-1 β polypeptide sequence.
 SEQ ID NO: 7 provides primate IL-1RA polypeptide sequence.
 10 SEQ ID NO: 8 provides rodent IL-1 γ (IGIF) polypeptide sequence.
 SEQ ID NO: 9 provides primate IL-1 γ (IGIF) polypeptide sequence.
 SEQ ID NO: 10 provides rodent IL-1 ϵ polypeptide sequence.
 SEQ ID NO: 11 provides rodent IL-1 δ polypeptide sequence.
 SEQ ID NO: 12 provides primate IL-1R6 nucleotide sequence.
 15 SEQ ID NO: 13 provides primate IL-1R6 polypeptide sequence.
 SEQ ID NO: 14 provides rodent IL-1R6 nucleotide sequence.
 SEQ ID NO: 15 provides rodent IL-1R6 polypeptide sequence.

20 <110> Debets, Johannes E.M.A.
 Timans, Jacqueline C.
 Bazan, J. Fernando
 Kastelein, Robert A.

25 <120> Mammalian Cytokines; Receptors; Related Reagents and
 Methods
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35 <170> PatentIn Ver. 2.1
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 Homo sapiens

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 Lys Val Leu Tyr Leu His Asn Asn Gln Leu Leu Ala Gly Gly Leu His
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 Ala Gly Lys Val Ile Lys Gly Glu Glu Ile Ser Val Val Pro Asn Arg
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5 tgg ctg gat gcc agc ctg tcc ccc gtc atc ctg ggt gtc cag ggt gga 249
 Trp Leu Asp Ala Ser Leu Ser Pro Val Ile Leu Gly Val Gln Gly Gly
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10 agc cag tgc ctg tca tgt ggg gtg ggg cag gag ccg act cta aca cta 297
 Ser Gln Cys Leu Ser Cys Gly Val Gly Gln Glu Pro Thr Leu Thr Leu
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15 gag cca gtg aac atc atg gag ctc tat ctt ggt gcc aag gaa tcc aag 345
 Glu Pro Val Asn Ile Met Glu Leu Tyr Leu Gly Ala Lys Glu Ser Lys
 85 90 95

20 agc ttc acc ttc tac cgg cgg gac atg ggg ctc acc tcc agc ttc gag 393
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25 tcg gct gcc tac ccg gcc tgg ttc ctg tgc acg gtg cct gaa gcc gat 441
 Ser Ala Ala Tyr Pro Gly Trp Phe Leu Cys Thr Val Pro Glu Ala Asp
 115 120 125

30 cag cct gtc aga ctc acc cag ctt ccc gag aat ggt gcc tgg aat gcc 489
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 130 135 140

35 ccc atc aca gac ttc tac ttc cag cag tgt gac tagggcaacg tgcacccag 542
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 Homo sapiens

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 Tyr Pro Glu Ala Leu Glu Gln Gly Arg Gly Asp Pro Ile Tyr Leu Gly
 65 70 75
 5 atc cag aat cca gaa atg tgt ttg tat tgt gag aag gtt gga gaa cag 348
 Ile Gln Asn Pro Glu Met Cys Leu Tyr Cys Glu Lys Val Gly Glu Gln
 80 85 90
 10 ccc aca ttg cag cta aaa gag cag aag atc atg gat ctg tat ggc caa 396
 Pro Thr Leu Gln Leu Lys Glu Gln Lys Ile Met Asp Leu Tyr Gly Gln
 95 100 105 110
 15 ccc gag ccc gtg aaa ccc ttc ctt ttc tac cgt gcc aag act ggt agg 444
 Pro Glu Pro Val Lys Pro Phe Leu Phe Tyr Arg Ala Lys Thr Gly Arg
 115 120 125
 acc tcc acc ctt gag tct gtg gcc ttc ccg gac tgg ttc att gcc tcc 492
 Thr Ser Thr Leu Glu Ser Val Ala Phe Pro Asp Trp Phe Ile Ala Ser
 130 135 140
 20 tcc aag aga gac cag ccc atc att ctg act tca gaa ctt ggg aag tca 540
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 145 150 155
 25 tac aac act gcc ttt gaa tta aat ata aat gac tgaactcagc ctgaggtgg 593
 Tyr Asn Thr Ala Phe Glu Leu Asn Ile Asn Asp
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 35 gagagctggg tggataaagg ctgtcctctc aagctggtgc tgtgttagcc acaaggcacc 833
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 40 gaagatgctt cagagctcat gcgcgttacc cagatggcca tgactagcac agagctgacc 953
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35 40 45
 Asp Ser Val Thr Pro Val Thr Val Ala Val Ile Thr Cys Lys Tyr Pro
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 5 Glu Ala Leu Glu Gln Gly Arg Gly Asp Pro Ile Tyr Leu Gly Ile Gln
 65 70 75 80
 10 Asn Pro Glu Met Cys Leu Tyr Cys Glu Lys Val Gly Glu Gln Pro Thr
 85 90 95
 Leu Gln Leu Lys Glu Gln Lys Ile Met Asp Leu Tyr Gly Gln Pro Glu
 100 105 110
 15 Pro Val Lys Pro Phe Leu Phe Tyr Arg Ala Lys Thr Gly Arg Thr Ser
 115 120 125
 Thr Leu Glu Ser Val Ala Phe Pro Asp Trp Phe Ile Ala Ser Ser Lys
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 45 Asn Leu Asp Glu Ala Val Lys Phe Asp Met Gly Ala Tyr Lys Ser Ser
 35 40 45
 Lys Asp Asp Ala Lys Ile Thr Val Ile Leu Arg Ile Ser Lys Thr Gln
 50 50 55 60
 Leu Tyr Val Thr Ala Gln Asp Glu Asp Gln Pro Val Leu Leu Lys Glu
 65 70 75 80
 55 Met Pro Glu Ile Pro Lys Thr Ile Thr Gly Ser Glu Thr Asn Leu Leu
 85 90 95
 Phe Phe Trp Glu Thr His Gly Thr Lys Asn Tyr Phe Thr Ser Val Ala
 100 105 110
 60 His Pro Asn Leu Phe Ile Ala Thr Lys Gln Asp Tyr Trp Val Cys Leu
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 35 40 45
 Gly Glu Glu Ser Asn Asp Lys Ile Pro Val Ala Leu Gly Leu Lys Glu
 50 55 60

30 Lys Asn Leu Tyr Leu Ser Cys Val Leu Lys Asp Asp Lys Pro Thr Leu
 65 70 75 80

35 Gln Leu Glu Ser Val Asp Pro Lys Asn Tyr Pro Lys Lys Lys Met Glu
 85 90 95
 Lys Arg Phe Val Phe Asn Lys Ile Glu Ile Asn Asn Lys Leu Glu Phe
 100 105 110

40 Glu Ser Ala Gln Phe Pro Asn Trp Tyr Ile Ser Thr Ser Gln Ala Glu
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 35 40 45
 His Ala Leu Phe Leu Gly Ile His Gly Gly Lys Met Cys Leu Ser Cys
 50 55 60
 10 Val Lys Ser Gly Asp Glu Thr Arg Leu Gln Leu Glu Ala Val Asn Ile
 65 70 75 80
 15 Thr Asp Leu Ser Glu Asn Arg Lys Gln Asp Lys Arg Phe Ala Phe Ile
 85 90 95
 Arg Ser Asp Ser Gly Pro Thr Thr Ser Phe Glu Ser Ala Ala Cys Pro
 100 105 110
 20 Gly Trp Phe Leu Cys Thr Ala Met Glu Ala Asp Gln Pro Val Ser Leu
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 35 40 45
 Tyr Met Tyr Lys Asp Ser Glu Val Arg Gly Leu Ala Val Thr Leu Ser
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 Val Lys Asp Ser Lys Met Ser Thr Leu Ser Cys Lys Asn Lys Ile Ile
 65 70 75 80
 55 Ser Phe Glu Glu Met Asp Pro Pro Glu Asn Ile Asp Asp Ile Gln Ser
 85 90 95
 Asp Leu Ile Phe Phe Gln Lys Arg Val Pro Gly His Asn Lys Met Glu
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 60 Phe Glu Ser Ser Leu Tyr Glu Gly His Phe Leu Ala Cys Gln Lys Glu

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 5 Pro Arg Lys Glu Gln Thr Val Pro Val Thr Ile Thr Leu Leu Pro Cys
 35 40 45
 10 Gln Tyr Leu Asp Thr Leu Glu Thr Asn Arg Gly Asp Pro Thr Tyr Met
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 Gly Val Gln Arg Pro Met Ser Cys Leu Phe Cys Thr Lys Asp Gly Glu
 65 70 75 80
 15 Gln Pro Val Leu Gln Leu Gly Glu Gly Asn Ile Met Glu Met Tyr Asn
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 Lys Lys Glu Pro Val Lys Ala Ser Leu Phe Tyr His Lys Lys Ser Gly
 100 105 110
 20 Thr Thr Ser Thr Phe Glu Ser Ala Ala Phe Pro Gly Trp Phe Ile Ala
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 Val Cys Ser Lys Gly Ser Cys Pro Leu Ile Leu Thr Gln Glu Leu Gly
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 35 40 45
 50 Leu Asp Ala Ser Leu Ser Pro Val Ile Leu Gly Val Gln Gly Gly Ser
 50 55 60
 55 Gln Cys Leu Ser Cys Gly Thr Glu Lys Gly Pro Ile Leu Lys Leu Glu
 65 70 75 80
 Pro Val Asn Ile Met Glu Leu Tyr Leu Gly Ala Lys Glu Ser Lys Ser
 85 90 95
 60 Phe Thr Phe Tyr Arg Arg Asp Met Gly Leu Thr Ser Ser Phe Glu Ser
 100 105 110

Ala Ala Tyr Pro Gly Trp Phe Leu Cys Thr Ser Pro Glu Ala Asp Gln
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35 tca gca agc cag cct ttt gct ttt aat tgt aca ttc cct ccc ata aca 144
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Val Ser Lys Ile Ile Gln Ser Arg Ile His Gln Asp Glu Thr Trp Ile
65 70 75 80

45 ttg ttt ctc ccc atg gaa tgg ggg gac tca gga gtc tac caa tgt gtt 288
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85 90 95

50 ata aag ggt aga gac agc tgt cat aga ata cat gta aac cta act gtt 336
Ile Lys Gly Arg Asp Ser Cys His Arg Ile His Val Asn Leu Thr Val
100 105 110

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Phe Glu Lys His Trp Cys Asp Thr Ser Ile Gly Glu Leu Pro Asn Leu
115 120 125

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10	gaa	acc	agg	ctt	ttg	gtg	agc	aat	gtc	tcg	gca	gag	gac	aga	ggg	aac	576
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15	tac	gcg	tgt	caa	gcc	ata	ctg	aca	cac	tca	ggg	aag	cag	tac	gag	gtt	624
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35	aat	aca	aat	cta	cga	tgc	tgg	aga	gtc	aat	aac	act	ttg	gtg	gat	gat	816
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65	gtg	tac	ata	tac	aac	att	ttt	aag	atc	gac	att	gtt	ctt	tgg	tat	cga	1104
	Val	Tyr	Ile	Tyr	Asn	Ile	Phe	Lys	Ile	Asp	Ile	Val	Leu	Trp	Tyr	Arg	
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	Ala Val Ala Asn Val Ile Asp Glu Asn Val Lys Leu Cys Arg Arg Leu	435	440	445	
15	att gtc att gtg gtc ccc gaa tcg ctg ggc ttt ggc ctg ttg aag aac			1392	
	Ile Val Ile Val Val Pro Glu Ser Leu Gly Phe Gly Leu Leu Lys Asn	450	455	460	
20	ctg tca gaa gaa caa atc gcg gtc tac agt gcc ctg atc cag gac ggg			1440	
	Leu Ser Glu Glu Gln Ile Ala Val Tyr Ser Ala Leu Ile Gln Asp Gly	465	470	475	480
	atg aag gtt att ctc att gag ctg gag gaa atc gag gac tac aca gtc			1488	
25	Met Lys Val Ile Leu Ile Glu Leu Glu Lys Ile Glu Asp Tyr Thr Val	485	490	495	
	atg cca gag tca att cag tac atc aaa cag aag cat ggt gcc atc cgg			1536	
30	Met Pro Glu Ser Ile Gln Tyr Ile Lys Gln Lys His Gly Ala Ile Arg	500	505	510	
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	Trp His Gly Asp Phe Thr Glu Gln Ser Gln Cys Met Lys Thr Lys Phe	515	520	525	
35	tgg aag aca gtg aga tac cac atg cgg ccc aga agg tgt cgg cgg ttt			1632	
	Trp Lys Thr Val Arg Tyr His Met Pro Pro Arg Arg Cys Arg Pro Phe	530	535	540	
40	ctc cgg tcc acg tgc cgc agc aca cac ctc tgt acc gca cgg cag gcc			1680	
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	Homo sapiens				
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60	Ser Ala Ser Gln Pro Phe Ala Phe Asn Cys Thr Phe Pro Pro Ile Thr				

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10	Leu	Phe	Leu	Pro	Met	Glu	Trp	Gly	Asp	Ser	Gly	Val	Tyr	Gln	Cys	Val
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15	Phe	Glu	Lys	His	Trp	Cys	Asp	Thr	Ser	Ile	Gly	Gly	Leu	Pro	Asn	Leu
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	Glu	Thr	Arg	Leu	Leu	Val	Ser	Asn	Val	Ser	Ala	Glu	Asp	Arg	Gly	Asn
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30	Tyr	Ala	Cys	Gln	Ala	Ile	Leu	Thr	His	Ser	Gly	Lys	Gln	Tyr	Glu	Val
		195					200						205			
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				245						250					255	
	Asn	Thr	Asn	Leu	Arg	Cys	Trp	Arg	Val	Asn	Asn	Thr	Leu	Val	Asp	Asp
				260				265						270		
45	Tyr	Tyr	Asp	Glu	Ser	Lys	Arg	Ile	Arg	Glu	Gly	Val	Glu	Thr	His	Val
			275					280					285			
	Ser	Phe	Arg	Glu	His	Asn	Leu	Tyr	Thr	Val	Asn	Ile	Thr	Phe	Leu	Glu
	290					295						300				
50	Val	Lys	Met	Glu	Asp	Tyr	Gly	Leu	Pro	Phe	Met	Cys	His	Ala	Gly	Val
	305				310						315				320	
55	Ser	Thr	Ala	Tyr	Ile	Ile	Leu	Gln	Leu	Pro	Ala	Pro	Asp	Phe	Arg	Ala
				325						330				335		
	Tyr	Leu	Ile	Gly	Gly	Leu	Ile	Ala	Leu	Val	Ala	Val	Ala	Val	Ser	Val
				340				345						350		
60	Val	Tyr	Ile	Tyr	Asn	Ile	Phe	Lys	Ile	Asp	Ile	Val	Leu	Trp	Tyr	Arg
			355					360					365			

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 5 Ala Tyr Val Leu Tyr Pro Lys Pro His Lys Glu Ser Gln Arg His Ala
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 10 Cys Gly Tyr Lys Leu Phe Ile Phe Gly Arg Asp Glu Phe Pro Gly Gln
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 15 Ala Val Ala Asn Val Ile Asp Glu Asn Val Lys Leu Cys Arg Arg Leu
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 Ile Val Ile Val Val Pro Glu Ser Leu Gly Phe Gly Leu Leu Lys Asn
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 Met Lys Val Ile Leu Ile Glu Leu Glu Lys Ile Glu Asp Tyr Thr Val
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 25 Met Pro Glu Ser Ile Gln Tyr Ile Lys Gln Lys His Gly Ala Ile Arg
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	Met	Ile	Ser	Glu	Gly	Gln	Pro	Phe	Pro	Phe	Asn	Cys	Thr	Tyr	Pro	Pro	
			35				40					45					
10	gta	aca	aac	ggg	gca	gtg	aat	ctg	aca	tgg	cat	aga	aca	ccc	agt	aag	192
	Val	Thr	Asn	Gly	Ala	Val	Asn	Leu	Thr	Trp	His	Arg	Thr	Pro	Ser	Lys	
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15	agc	cca	atc	tcc	atc	aac	aga	cac	gtt	aga	att	cac	cag	gac	cag	tcc	240
	Ser	Pro	Ile	Ser	Ile	Asn	Arg	His	Val	Arg	Ile	His	Gln	Asp	Gln	Ser	
			65			70					75				80		
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	Trp	Ile	Leu	Phe	Leu	Pro	Leu	Ala	Leu	Glu	Asp	Ser	Gly	Ile	Tyr	Gln	
					85					90				95			
25	tgt	gtt	ata	aag	gat	gcc	cac	agc	tgt	tac	cga	ata	gct	ata	aac	cta	336
	Cys	Val	Ile	Lys	Asp	Ala	His	Ser	Cys	Tyr	Arg	Ile	Ala	Ile	Asn	Leu	
					100				105					110			
30	acc	gtt	ttt	aga	aaa	cac	tgg	tgc	gac	tct	tcc	aac	gaa	gag	agt	tcc	384
	Thr	Val	Phe	Arg	Lys	His	Trp	Cys	Asp	Ser	Ser	Asn	Glu	Glu	Ser	Ser	
					115			120					125				
35	ata	aat	tcc	tca	gat	gag	tac	cag	caa	tgg	tta	ccc	ata	gga	aaa	tcg	432
	Ile	Asn	Ser	Ser	Asp	Glu	Tyr	Gln	Gln	Trp	Leu	Pro	Ile	Gly	Lys	Ser	
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40	ggc	agt	ctg	acg	tgc	cat	ctc	tac	ttc	cca	gag	agc	tgt	gtt	ttg	gat	480
	Gly	Ser	Leu	Thr	Cys	His	Leu	Tyr	Phe	Pro	Glu	Ser	Cys	Val	Leu	Asp	
			145			150				155				160			
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	Ser	Ile	Lys	Trp	Tyr	Lys	Gly	Cys	Glu	Glu	Ile	Lys	Val	Ser	Lys	Lys	
					165				170					175			
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	Phe	Cys	Pro	Thr	Gly	Thr	Lys	Leu	Leu	Val	Asn	Asn	Ile	Asp	Val	Glu	
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	Asp	Ser	Gly	Ser	Tyr	Ala	Cys	Ser	Ala	Arg	Leu	Thr	His	Leu	Gly	Arg	
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	Ile	Phe	Thr	Val	Arg	Asn	Tyr	Ile	Ala	Val	Asn	Thr	Lys	Glu	Val	Gly	
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65	tct	gga	gga	agg	atc	cct	aac	atc	acg	tat	cca	aaa	aac	aac	tcc	att	720
	Ser	Gly	Gly	Arg	Ile	Pro	Asn	Ile	Thr	Tyr	Pro	Lys	Asn	Asn	Ser	Ile	
				225		230				235				240			
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	Glu	Val	Gln	Leu	Gly	Ser	Thr	Leu	Ile	Val	Asp	Cys	Asn	Ile	Thr	Asp	
					245					250				255			
75	acg	aag	gag	aat	acg	aac	ctc	aga	tgc	tgg	cga	gtt	aac	aac	acc	ctg	816
	Thr	Lys	Glu	Asn	Thr	Asn	Leu	Arg	Cys	Trp	Arg	Val	Asn	Asn	Thr	Leu	

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10	acc aat ctg tct ctg agg aat cac att ctg tac aca gtg aac ata aca Thr Asn Leu Ser Leu Arg Asn His Ile Leu Tyr Thr Val Asn Ile Thr	290 295	300	912
15	ttc tta gaa gtg aaa atg gag gac tac ggc cat cct ttc aca tgc cac Phe Leu Glu Val Lys Met Glu Asp Tyr Gly His Pro Phe Thr Cys His	305 310	315 320	960
20	gct gcg gtg tcc gca gcc tac atc att ctg aaa cgc cca gct cca gac Ala Ala Val Ser Ala Ala Tyr Ile Ile Leu Lys Arg Pro Ala Pro Asp	325 330	335	1008
25	ttc cgg gct tac ctc ata gga ggt ctc atg gct ttc cta ctt ctg gcc Phe Arg Ala Tyr Leu Ile Gly Gly Leu Met Ala Phe Leu Leu Leu Ala	340 345	350	1056
30	gtg tcc att ctg tac atc tac aac acc ttt aag gtc gac atc gtg ctt Val Ser Ile Leu Tyr Ile Tyr Asn Thr Phe Lys Val Asp Ile Val Leu	355 360	365	1104
35	tgg tat agg agt acc ttc cac act gcc cag gct cca gat gac gag aag Trp Tyr Arg Ser Thr Phe His Thr Ala Gln Ala Pro Asp Asp Glu Lys	370 375	380	1152
40	ctg tat gat gcc tat gtc tta tac ccc aag tac cca aga gaa agc cag Leu Tyr Asp Ala Tyr Val Leu Tyr Pro Lys Tyr Pro Arg Glu Ser Gln	385 390	395 400	1200
45	ggc cat gat gtg gac aca ctg gtg ttg aag atc ttg ccc gag gtg ctg Gly His Asp Val Asp Thr Leu Val Leu Lys Ile Leu Pro Glu Val Leu	405 410	415	1248
50	gag aaa cag tgt gga tat aag tta ttc ata ttt ggc agg gat gaa ttc Glu Lys Gln Cys Gly Tyr Lys Leu Phe Ile Phe Gly Arg Asp Glu Phe	420 425	430	1296
55	cct gga caa gct gtg gcc agc gtc att gat gaa aac att aag ctg tgt Pro Gly Gln Ala Val Ala Ser Val Ile Asp Glu Asn Ile Lys Leu Cys	435 440	445	1344
60	agg agg ctg atg gtc ctc gtg gca cca gag aca tcc agc ttc agc ttt Arg Arg Leu Met Val Leu Val Ala Pro Glu Thr Ser Ser Phe Ser Phe	450 455	460	1392
65	ctg aag aac ttg act gaa gaa caa atc gct gtc tac aat gcc ctc gtc Leu Lys Asn Leu Thr Glu Glu Gln Ile Ala Val Tyr Asn Ala Leu Val	465 470	475 480	1440
70	cag gac ggc atg aag gtc att ctg att gaa ctg gag aga gtc aag gac Gln Asp Gly Met Lys Val Ile Leu Ile Glu Leu Glu Arg Val Lys Asp	485 490	495	1488
75	tac agc acc atg ccc gag tcc att cag tac atc cga cag aag cac ggg Tyr Ser Thr Met Pro Glu Ser Ile Gln Tyr Ile Arg Gln Lys His Gly	500 505	510	1536

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	Ala Ile Gln Trp Asp Gly Asp Phe Thr Glu Gln Ala Gln Cys Ala Lys	
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5	acg aaa ttc tgg aag aaa gtg aga tat cat atg cca ccc agg agg tac	1632
	Thr Lys Phe Trp Lys Lys Val Arg Tyr His Met Pro Pro Arg Arg Tyr	
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10	ccg gca tct ccc ccc gtc cag ctg cta gga cac aca ccc cgc ata cca	1680
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35	Val Thr Asn Gly Ala Val Asn Leu Thr Trp His Arg Thr Pro Ser Lys	
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	Ser Pro Ile Ser Ile Asn Arg His Val Arg Ile His Gln Asp Gln Ser	
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40	Trp Ile Leu Phe Leu Pro Leu Ala Leu Glu Asp Ser Gly Ile Tyr Gln	
	85 90 95	
45	Cys Val Ile Lys Asp Ala His Ser Cys Tyr Arg Ile Ala Ile Asn Leu	
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	115 120 125	
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	Gly Ser Leu Thr Cys His Leu Tyr Phe Pro Glu Ser Cys Val Leu Asp	
	145 150 155 160	
55	Ser Ile Lys Trp Tyr Lys Gly Cys Glu Glu Ile Lys Val Ser Lys Lys	
	165 170 175	
60	Phe Cys Pro Thr Gly Thr Lys Leu Leu Val Asn Asn Ile Asp Val Glu	
	180 185 190	

Asp Ser Gly Ser Tyr Ala Cys Ser Ala Arg Leu Thr His Leu Gly Arg
 195 200 205
 5 Ile Phe Thr Val Arg Asn Tyr Ile Ala Val Asn Thr Lys Glu Val Gly
 210 215 220
 Ser Gly Gly Arg Ile Pro Asn Ile Thr Tyr Pro Lys Asn Asn Ser Ile
 225 230 235 240
 10 Glu Val Gln Leu Gly Ser Thr Leu Ile Val Asp Cys Asn Ile Thr Asp
 245 250 255
 Thr Lys Glu Asn Thr Asn Leu Arg Cys Trp Arg Val Asn Asn Thr Leu
 260 265 270
 15 Val Asp Asp Tyr Tyr Asn Asp Phe Lys Arg Ile Gln Glu Gly Ile Glu
 275 280 285
 Thr Asn Leu Ser Leu Arg Asn His Ile Leu Tyr Thr Val Asn Ile Thr
 290 295 300
 20 Phe Leu Glu Val Lys Met Glu Asp Tyr Gly His Pro Phe Thr Cys His
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 325 330 335
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 30 Val Ser Ile Leu Tyr Ile Tyr Asn Thr Phe Lys Val Asp Ile Val Leu
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 370 375 380
 35 Leu Tyr Asp Ala Tyr Val Leu Tyr Pro Lys Tyr Pro Arg Glu Ser Gln
 385 390 395 400
 40 Gly His Asp Val Asp Thr Leu Val Leu Lys Ile Leu Pro Glu Val Leu
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 Glu Lys Gln Cys Gly Tyr Lys Leu Phe Ile Phe Gly Arg Asp Glu Phe
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 45 Pro Gly Gln Ala Val Ala Ser Val Ile Asp Glu Asn Ile Lys Leu Cys
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 485 490 495
 Tyr Ser Thr Met Pro Glu Ser Ile Gln Tyr Ile Arg Gln Lys His Gly
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515

520

525

Thr Lys Phe Trp Lys Lys Val Arg Tyr His Met Pro Pro Arg Arg Tyr
530 535 540

5

Pro Ala Ser Pro Pro Val Gln Leu Leu Gly His Thr Pro Arg Ile Pro
545 550 555 560

Gly

10